

AMENDMENTS TO THE CLAIMS

Claims 1-13 (canceled)

Claim 14 (previously presented) A platform for providing home agent services in a network, the platform comprising:

an interface to a first network;

at least one virtual interface to a second network; and

a single chassis that includes software and hardware, the software implementing a sorting module and two or more software-replicated home agents associated with the at least one virtual interface, wherein the sorting module demultiplexes a plurality of packets arriving at the first network interface and forwards the plurality of packets to the two or more software-replicated home agents in accordance with information contained in the packets, and

wherein the software implementing the two or more software-replicated home agents provides for the two or more software replicated home agents receiving network management packets for managing the operation of the two or more software-replicated home agents.

Claim 15 (previously presented) The platform of claim 14, wherein the packets for managing the operation of the two or more software-replicated home agents are received via the at least one virtual interface.

Claim 16 (previously presented) The platform of claim 14, wherein the packets for managing the operation of the two or more software-replicated home agents are received via the interface to the first network.

Claim 17 (previously presented) The platform of claim 14, wherein the network management packets comprise Simple Network Management Protocol (SNMP) packets.

Claim 18 (previously presented) The platform of claim 14, wherein the network management packets comprise Common Management Information Protocol (CMIP) packets.

Claim 19 (previously presented) The platform of claim 14, wherein each of the software-replicated home agents is separately configured and managed via respective private networks with which the software-replicated home agents are associated.

Claim 20 (previously presented) The platform of claim 14, wherein the two or more software-replicated home agents are implemented as respective instantiations of home agent machine executable code.

Claim 21 (previously presented) The platform of claim 20, wherein the respective instantiations of home agent machine executable code are implemented using a single set of machine executable instructions.

Claim 22 (previously presented) The platform of claim 21, wherein the single set of machine executable instructions further implements the sorting module.

Claim 23 (previously presented) The platform of claim 14, wherein the sorting module is included in software implementing a master home agent.

Claim 24 (previously presented) The platform of claim 14, wherein the two or more software-replicated home agents are implemented as respective, operationally separate instantiations of a home agent software program.

Claim 25 (previously presented) The platform of claim 14, wherein the sorting module and the two or more software-replicated home agents are assigned a single IP address.

Claim 26 (previously presented) The platform of claim 14, wherein the sorting module and the two or more software replicated home agents are each assigned individual IP addresses.

Claim 27 (previously presented) A platform for providing home agent services in a network, the platform comprising:

an interface to a first network;

at least one virtual interface to a second network; and

a single chassis that includes software and hardware implementing a sorting module and two or more software-replicated home agents associated with the at least one virtual interface, wherein the sorting module and the two or more software-replicated home agents are implemented using a single set of machine executable code, and

wherein the sorting module demultiplexes a plurality of packets arriving at the first network interface and forwards the plurality of packets to the two or more software-replicated home agents in accordance with information contained in the packets.

Claim 28 (previously presented) The platform of claim 27, wherein the sorting module is implemented on a first computing entity in the single chassis and the two or more software-replicated home agents are implemented on at least a second computing entity in the single chassis.

Claim 29 (previously presented) The platform of claim 27, wherein the two or more software-replicated home agents terminate network management packets.

Claim 30 (previously presented) The platform of claim 29, wherein the network management packets are included in the plurality of packets arriving at the interface to the first network.

Claim 31 (previously presented) The platform of claim 29, wherein the network management packets are communicated to the two or more software-replicated home agents from the second network via the at least one virtual interface.

Claim 32 (previously presented) A method for providing home agent services comprising:

providing a single chassis having machine executable instructions stored therein, the machine executable instructions, when executed, implementing a sorting module and two or more software-replicated home agents;

receiving a plurality of packets from a first network at the chassis;

demultiplexing the plurality of packets with the sorting module;

forwarding the plurality of packets to the two or more software-replicated home agents in accordance with information contained in the packets;

forwarding the plurality of packets to at least a second network via at least one virtual interface;

receiving a network management packet at a first home agent of the two or more software-replicated home agents; and

modifying operation of the first home agent in accordance with information in the network management packet.

Claim 33 (previously presented) The method of claim 32, wherein the network management packet comprises a Simple Network Management Protocol (SNMP) packet.

Claim 34 (previously presented) The method of claim 32, wherein the two or more software-replicated home agents are implemented as respective instantiations of home agent machine executable code.

Claim 35 (previously presented) The platform of claim 34, wherein the respective instantiations of home agent machine executable code are implemented using a single set of machine executable instructions included in the chassis.

Claim 36 (previously presented) The platform of claim 35, wherein the single set of machine executable instructions further implements the sorting module.

Claim 37 (previously presented) The method of claim 32, wherein the two or more software-replicated home agents are implemented as respective, operationally separate instantiations of a home agent software program.

Claim 38 (previously presented) The method of claim 32, wherein the network management packet is received via a private network associated with the first home agent.

Claim 39 (new) A platform for providing home agent services in a network, the platform comprising:

an interface to a first network;

at least one virtual interface to a second network; and

a single chassis that includes software and hardware, the software implementing:
a sorting module; and
two or more home agents associated with the at least one virtual interface,
wherein the sorting module demultiplexes a plurality of packets arriving at the first network interface and forwards the plurality of packets to the two or more home agents in accordance with information contained in the packets, and
wherein the two or more home agents are implemented as distinct functional entities in the single computing platform.

Claim 40 (new) The platform of claim 39, wherein the two or more home agents are implemented as distinct software processing threads.

Claim 41 (new) The platform of claim 39, wherein the sorting module is implemented on a first computing entity in the single chassis and the two or more home agents are implemented on at least a second computing entity in the single chassis.

Claim 42 (new) The platform of claim 39, wherein each of the two or more home agents are each associated with a respective virtual private network.

Claim 43 (new) The platform of claim 39, wherein each of the two or more home agents are implemented as respective, operationally separate instantiations of a home agent software program.

Claim 44 (new) The platform of claim 39, wherein at least two home agents of the two or more home agents are separately configured and managed via respective virtual private networks with which the at least two of the two or more home agents are associated, and wherein configuration and management of one home agent of the two or more home agents does not affect the operation of other home agents of the two or more home agents.

Claim 45 (new) The platform of claim 44, wherein the at least two home agents of the two or more home agents are configured and managed using network managements packets.

Claim 46 (new) The platform of claim 44, wherein the at least two home agents are configured and managed by users of the respective virtual private networks.

Claim 47 (new) The platform of claim 39, wherein the two or more home agents are each assigned unique Internet Protocol addresses.

Claim 48 (new) The platform of claim 39, wherein the platform comprises a router.

Claim 49 (new) The platform of claim 39, wherein the two or more home agents are segregated into separate address space in one or more computing devices included in the platform.